SCIENCE AND DEMOCRACY
FYSE 1424
(Fall’14)

Instructor: Professor Heidi Grasswick
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Phone: ext. 5662
E-Mail: grasswick@middlebury.edu

Office Hours: Tues 2:45-4:00
Wed. 1:30-3:15
and by appointment

Class Meetings: T, Th 9:30-10:45
Chateau 109

Course Overview and Objectives

The scientific method has been heralded as inherently democratic, based as it is on observation rather than authority. Yet the relationship between science and democracy is much more complex, with scientists carrying authority based on their specialized knowledge. In this course we will explore the challenges of integrating science and democracy, investigating how science can be used to serve democratic goals and where there are tensions. We will consider such questions as whether or not the commercialization of science makes it difficult to serve the needs of a diverse society well, whether or not it is important to have diverse representation within scientific communities in order to produce objective knowledge, and what the appropriate role of scientific experts might be in developing sound public policy on topics such as climate change, health policy, medical research, and food safety.

3 hrs. sem. (Grasswick) PHL

In this course you will be asked to engage with a great deal of thought-provoking material, and it is hoped that you will learn to think critically about some very complex issues. Skills that will be developed throughout this course include the abilities to (a) read and comprehend a variety of scholarly work, especially sociological and philosophical material, (b) extract the reasoning found in texts and articulate that reasoning through discussion and writing, (c) form patterns of reasoning in one’s own thought and articulate those thoughts clearly in conversation and writing, and (d) engage in discussion about challenging issues with others who may not be of the same opinion in a manner conducive to mutual respect and intellectual development. As a first year seminar, we will pay particular attention to the development of our writing skills. We will use writing as a tool to develop the more general skills of critical thinking. However, even with the writing concentration, the development of discussion skills will not be neglected; analytical writing skills are often developed in conjunction with one’s oral skills of articulating arguments and posing critical questions.

This course can be used to satisfy the college distribution requirements in Philosophical and Religious Studies (PHL). As a first year seminar, it is the first of two required writing
intensive courses you will take at the college (in a future semester, you will take a CW course as your second writing intensive class)

**Texts**

Most of our readings will be journal articles that will be made available on electronic reserve (ER). The password to access electronic reserves for our course is: **3454hg**. There is a link to our ER page through the “Course Hub” (type in go/hub)

Additionally, the following books are available for purchase at the College Store:

*The Immortal Life of Henrietta Lacks*, Rebecca Skloot  
*The Fifth Branch: Science Advisers as Policymakers*, Sheila Jasanoff  
(both of these are available for purchase at the College Store)

**Writing Manuals**


Recommended: *Elements of Style*, William Strunk Jr and E.B. White, 4th Ed. (available on reserve and also in electronic form through the library)

*It is highly recommended that you purchase a good dictionary (more than a pocket dictionary) that will serve as a reference throughout your undergraduate career. Free online dictionaries are not always satisfactory.*

**Resource People**

Our Peer Mentor: Marina DiMarco  
mdimarco@middlebury.edu

Our Librarian:  
Steve Bertolino, Research and Instruction Librarian/Film & Media Librarian  
443-5818  
sbertoli@middlebury.edu

**Course Requirements**

All components of the course must be completed in order to pass the course. Class participation is required, and all assignments are expected to be handed in on time. Unless an extension has been granted ahead of time, late assignments will normally be subject to grade lowering at a rate of 1/3 of a letter grade per 24hr period. Extensions must be requested (and granted) at least 24 hours ahead of time. In fairness to other students, and for your own benefit, extensions will only be granted in extenuating circumstances. You should note that
several times throughout the term we will be relying on each other’s work as the basis for workshops and discussion. At these times it is particularly important that everyone have their assignments completed on time and penalties in these cases will be severe. \textit{You are expected to take your responsibilities as a class member very seriously.}

Your grade will be determined according to the following course requirements:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>First paper</td>
<td>15%</td>
<td>Oct 1</td>
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<tr>
<td>Second Paper</td>
<td>15%</td>
<td>Oct 17</td>
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<tr>
<td>Third Paper</td>
<td>20%</td>
<td>Nov 14</td>
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<tr>
<td>Presentation and Bibliography</td>
<td>5%</td>
<td>Nov 17 (connected to fourth paper)</td>
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<tr>
<td>Fourth Paper</td>
<td>20%</td>
<td>Dec 8</td>
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<tr>
<td>Class Participation</td>
<td>25%</td>
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<td>(includes class discussion, informal writing, meetings with peer tutor, peer reviews)</td>
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\textbf{CLASS PARTICIPATION:} Attendance in class is expected. If you must be absent from class it is your responsibility to catch up on what was missed, and if necessary, make arrangements with me to make up for the class discussion component. More than one unexcused absence will affect your class participation grade.* Class participation, of course, involves more than just attendance. In order to be an active class participant, you need not always have something to say. But you must be an \textbf{active listener} of others in the class, and \textbf{contribute} to class discussion when you feel you do have something to say. The class participation component of your grade also includes several informal writing pieces, such as response papers, which will help prepare you for class discussion. We may also use electronic-based conferencing, again designed to prepare you for class discussion.

\*"explained" absences do not constitute "excused" absences. Individual arrangements must be made in the case of "explained" absences. \textbf{Athletes:} please note that official game absences are "explained", not "excused". Please see me early in the term to make necessary arrangements.

\textbf{Notes Relevant to the Class}

As a student at Middlebury, you are responsible for understanding and following the norms of academic honesty. In the case of this course, in which writing forms a major component, concerns of plagiarism are particularly relevant. Early in the term we will review the statement on plagiarism in your college handbook and discuss issues of plagiarism and proper citation. But if at any time in the term you have any questions about plagiarism, including whether or not something would constitute plagiarism, please see me immediately.

I will make every effort to be available to you throughout the term. However, I am not available 24 hours a day, 7 days a week. I have scheduled office hours, and am also available by appointment if you are not able to make the scheduled hours. I check my e-mail fairly regularly, but not incessantly.
*Students with documented disabilities who believe that they may need accommodations in this class are encouraged to contact me as early in the semester as possible to ensure that such accommodations are implemented in a timely fashion. Assistance is available to eligible students through the ADA Office. Please contact Jodi Litchfield, the ADA Coordinator, at litchfie@middlebury.edu or 802-443-5936 for more information. All discussions will remain confidential.

*Students whose first language is not English—if you need some extra assistance with the reading and writing assignments, please see me early in the term to explore possible options.

**CLASS SCHEDULE**
(subject to adjustments, depending on our progress)

NOTE FOR YOUR CALENDARS:
   **Lecture Tues Oct 21st 4:30,** Prof. Nancy McHugh on Science and Justice (required)
details TBA

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<tr>
<th>DATE</th>
<th>TOPIC/READING</th>
<th>NOTES</th>
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<tr>
<td>Orientation Week  Sept. 2 Intro: “Science” and “Democracy”</td>
<td>The Concepts of “Science” and “Democracy” Speak out for Science: <a href="https://www.youtube.com/watch?v=7bZLpqzFqV1&amp;index=5&amp;list=PL72387313570B3285">https://www.youtube.com/watch?v=7bZLpqzFqV1&amp;index=5&amp;list=PL72387313570B3285</a></td>
<td>-Course Introduction -in class writing -advising and registration information</td>
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| Wk 1 Sept. 9/11 Unit 1: History and Institutions of Science | **Tues:** Stanford Encyclopedia of Philosophy entry on “The Enlightenment” by William Bristow (available on the web; please read all sections with the exception of 2.3 and 3-3.3)  
**Thurs:** -Shamoo and Resnik, “The Scientist in Society” (ER) -Blair’s Speech to the Royal Society (handout) | -Response Paper due Thurs on Shamoo and Resnik |
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<th>Wk 2</th>
<th>Sept. 16/18</th>
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<td><strong>Tues:</strong></td>
<td>Merton “The Normative Structure of Science” (ER)</td>
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| **Thurs:** | Kuhn “The Nature and Necessity of Scientific Revolutions” (ER)  
Recomm: Kuhn: “Postscript” (ER) |

| Wk 3  | Sept. 23/25  
Unit 2: Justice Issues in Science |
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<tr>
<td><strong>Tues/Thurs:</strong></td>
<td><em>The Immortal Life of Henrietta Lacks</em></td>
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| **Tues:** | Hand out paper 1  
Discussion of academic honesty tutorial  
Thurs: news check in Meet with Peer Mentor to go over paper 1 draft Thurs 25- 
Mon 30. |

| Wk 4  | Sept. 30/Oct2  
Unit 3: Voices of “Experts” |
|-------|-------------|
| **Tues:** | Reardon “On the Emergence of Science and Justice” (ER)  
-Jones “The Tuskegee Syphilis Experiment” (ER) |
| **Thurs:** | selected readings on the Havasupai/Arizona State University case |
| **Tues:** | Epstein “Democracy, Expertise, and AIDS Treatment Activism” (ER)  
Mooney “Do Scientists Understand the Public?” (ER) |
| **Thurs:** | Writing workshop |
| **Tues:** | Continue peer mentor meetings  
*Paper 1 Due Wed Oct 1st*  
-Hand out paper 2  
-Thurs news check in  
-Seminar Dinner @ Wonnacott Commons Thurs Oct 2nd |

| Wk 5  | Oct. 7/9  
Unit 3: Voices of “Experts” |
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<td><strong>Tues:</strong></td>
<td>McHugh “More than Skin Deep…” (ER)</td>
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| **Thurs:** | Writing Workshop (in class)  
-Meet PM Thurs Oct 9-Wed Oct 15 |

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<th>Wk 6</th>
<th>Oct. 14/16</th>
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<td><strong>Tues:</strong></td>
<td>No Class (break)</td>
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<tr>
<td><strong>Thurs:</strong></td>
<td>McHugh “More than Skin Deep…” (ER)</td>
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<tr>
<td><strong>Paper 2 due Fri Oct 17</strong></td>
<td>Thurs news check in</td>
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| Wk 7  | Oct. 21/23 | Tues: Nancy McHugh, Guest speaker  
|       |           | Additional readings TBA  
|       |           | Thurs: Jasanoff *The Fifth Branch*  
|       |           | Attend Guest Lecture 4:30  
|       |           | Dr. Nancy McHugh: room TBA  
|       |           | Seminar dinner at Brainerd Commons following lecture  
|       |           | *response paper on McHugh talk due **Wed Oct 22** (email to me by 7pm)  
|       |           | Thurs: news check in  

| Wk 8  | Oct. 28/30 | Tues:  
|       |           | -Jasanoff cont’d  
|       |           | -NYTimes “Legislating Ignorance about Guns” (ER)  
|       |           | -Dickson “Towards a Democratic Strategy for Science” (ER)  
|       |           | Thurs:  
|       |           | **Library research workshop (tentative date)**  
|       |           | Reading: “At Sea in a Deluge of Data” (ER)  
|       |           | *Start research for final paper *  
|       |           | hand out paper 3  

| Wk 9  | Nov. 4/6   | Tues:  
|       |           | -Oreskes “Challenging Knowledge” (ER)  
|       |           | -Proctor “Nazi Medicine and the Politics of Knowledge (ER)  
|       |           | -Anderson “Democracy, Public Policy and Lay Assessments of Scientific Testimony” (ER)  
|       |           | Thurs: Writing Workshop (partial class)  
|       |           | *Draft Paper 3 due Thurs Nov 6 for Writing Workshop (combination electronic peer review and in-class) Meet PM Fri 7-Mon10 with draft  

| Wk 10 | Nov. 11/13 | Tues: Etzkowitz et al “The Coming Gender Revolution in Science” (ER)  
|       | Nov. 11/13 | Thurs: Gowaty “Perception Bias, Social Inclusion, and Sexual Selection...” (ER)  
|       | Unit 5 : Democracy within Science? | Recomm: Longino “Values and Objectivity” (ER)  
|       |           | Paper 3 due Friday Nov 14th  
|       |           | Thurs: news check in  

| Wk 11  
Nov. 18/20 | Selected readings based on final projects (time permitting) | Annotated Bibliography for final paper due Mon Nov 17th |
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<tr>
<td>Unit 6: Selected Topics</td>
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<td>Thurs: news check in</td>
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| Wk 12  
Nov. 25/27 | Tues: Topics and Presentations TBA | Discussion: final writing assignment |
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<td>Thurs: <strong>No Class (Thanksgiving)</strong></td>
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| Wk 13  
Dec 2/4 | Topics and Presentations TBA | **PM appts. booked well ahead of time!** |
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<tbody>
<tr>
<td></td>
<td>Course Sum up</td>
<td><strong>Final Paper Due by electronic submission Tues. Dec. 8th</strong></td>
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